

Outgoing
0070004
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From: April Abate
To: dmackinnon@osmre.gov
CC: OGMCOAL@utah.gov; swiler@blm.gov
Date: 9/12/2012 2:32 PM
Subject: Castle Gate Phase III Inspection Report
Attachments: Castlegate Ph. III Bond Release Photos.pdf; 4153 TA.pdf; CG Phase III Decision Document.doc; April Abate.vcf

Hello Dan and Sue,

Here is our inspection report, technical analysis, and DRAFT decision document on the Phase III bond release. The end of the public comment period is the end of September. If we can get your concurrence letters before then, that would be ideal.

Let me know if you have any additional questions. Thanks for your work on this!

Regards,

April

April A. Abate

Environmental Scientist III
Division of Oil, Gas and Mining
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09/12/12 0070004
Outgoing



GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Inspection Report

Permit Number:	C0070004
Inspection Type:	BOND RELEASE
Inspection Date:	Wednesday, August 29, 2012
Start Date/Time:	8/29/2012 10:00:00 AM
End Date/Time:	8/29/2012 2:00:00 PM
Last Inspection:	

Inspector: April Abate

Weather: Clear, 80s F

InspectionID Report Number: 3225

Accepted by: jhelfric
9/6/2012

Representatives Present During the Inspection:

OGM	April Abate
OGM	Daron Haddock
OGM	Ingrid Campbell
OGM	James Owen
Company	Dennis Ware

Permitee: **CASTLE GATE HOLDING CO**

Operator: **CASTLE GATE HOLDING CO**

Site: **CASTLE GATE MINE**

Address: **PO BOX 30, HELPER UT 84526-0030**

County: **CARBON**

Permit Type: **PERMANENT COAL PROGRAM**

Permit Status: **RECLAIMED**

Current Acreages

7,619.00	Total Permitted
62.42	Total Disturbed
62.42	Phase I
58.10	Phase II
	Phase III

Mineral Ownership

- ☒ Federal
- ☒ State
- ☒ County
- ☒ Fee
- ☐ Other

Types of Operations

- ☒ Underground
- ☒ Surface
- ☒ Loadout
- ☐ Processing
- ☐ Reprocessing

Report summary and status for pending enforcement actions, permit conditions, Division Orders, and amendments:

The purpose of this inspection was to conduct a Phase III Bond Release of 57.44 acres of the Hardscrabble and Sow Belly Canyons within the Castle Gate permit area. Sue Wiler from BLM and Dan McKinnon from OSM were also present at the inspection. Jeff Richins from the Price River Water Improvement District was on-site for the first 10 minutes of the inspection inquiring on whether or not any of the inspection was taking place on or near PRWiD property. We informed him that it was not. Mr. Richins did not stay for the remainder of the inspection.

Inspector's Signature: **April Abate**

April Abate,

Inspector ID Number: 60

Date: Tuesday, September 04, 2012

Note: This inspection report does not constitute an affidavit of compliance with the regulatory program of the Division of Oil, Gas and Mining.
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • www.ogm.utah.gov

Digitally signed by April Abate
DN: cn=April Abate, o=Division of Oil, Gas, & Mining,
ou=Coal Regulatory Program, email=aprilabate@utah.gov,
c=US
Date: 2012.09.12 14:23:32 -06'00'



Permit Number: C0070004
 Inspection Type: BOND RELEASE
 Inspection Date: Wednesday, August 29, 2012

Inspection Continuation Sheet

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REVIEW OF PERMIT, PERFORMANCE STANDARDS PERMIT CONDITION REQUIREMENTS

1. Substantiate the elements on this inspection by checking the appropriate performance standard.
 - a. For COMPLETE inspections provide narrative justification for any elements not fully inspected unless element is not appropriate to the site, in which case check Not Applicable.
 - b. For PARTIAL inspections check only the elements evaluated.
2. Document any noncompliance situation by reference the NOV issued at the appropriate performance standard listed below.
3. Reference any narratives written in conjunction with this inspection at the appropriate performance standard listed below.
4. Provide a brief status report for all pending enforcement actions, permit conditions, Divison Orders, and amendments.

	Evaluated	Not Applicable	Comment	Enforcement
1. Permits, Change, Transfer, Renewal, Sale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Signs and Markers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Topsoil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.a Hydrologic Balance: Diversions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.b Hydrologic Balance: Sediment Ponds and Impoundments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.c Hydrologic Balance: Other Sediment Control Measures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.d Hydrologic Balance: Water Monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.e Hydrologic Balance: Effluent Limitations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Explosives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Disposal of Excess Spoil, Fills, Benches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Coal Mine Waste, Refuse Piles, Impoundments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Noncoal Waste	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Protection of Fish, Wildlife and Related Environmental Issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Slides and Other Damage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Contemporaneous Reclamation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Backfilling And Grading	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Revegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14. Subsidence Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Cessation of Operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.a Roads: Construction, Maintenance, Surfacing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16.b Roads: Drainage Controls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Other Transportation Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Support Facilities, Utility Installations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. AVS Check	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Air Quality Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Bonding and Insurance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22. Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. Permits, Change, Transfer, Renewal, Sale

Castle Gate Holding Company (the Permittee) is seeking Phase III Bond Release on 57.44 acres in Hardscrabble and Sow Belly Canyons within the Castle Gate permit area. The application addresses 38.28 acres in Hardscrabble canyon, excluding a 0.72-acre area that was the location of a reclaimed substation. The application addresses 19.16 acres in Sowbelly canyon excluding a 1.84-acre area that was the location of a reclaimed substation. The vegetation studies were not completed in time for Phase III bond release on the substation areas. These areas are expected to apply for Phase III bond release in 2013. Between the remaining acreage in Hardscrabble and Sowbelly canyons and Adit #1 areas, the amount of acres in the Castle Gate permit remaining for Phase III Bond release totals 5.56.

4.a Hydrologic Balance: Diversions

Each of the canyons had a main channel with established water monitoring location points above and below the reclaimed disturbed areas. Neither of these canyons have reported any historic flow or water quality data. Some evidence of flow was noted in Sow belly canyon but no indications of sediment flowing off the permit area below the disturbed area locations was evident.

4.b Hydrologic Balance: Sediment Ponds and Impoundments

All ponds and impoundments have been reclaimed.

8. Noncoal Waste

The gate is locked going into Hardscrabble Canyon and there is limited access going into Sowbelly Canyon. The sites are free of trash and appear to be well maintained. Dennis Ware has spent a lot of time removing subsidence stakes and markers, so that there is little evidence of mining remaining.

10. Slides and Other Damage

The sites appear stable with no evidence of slides or other earth movement.

13. Revegetation

The vegetation in Sowbelly and Hardscrabble is well established and meets the standards set by the reference area according to the year nine and ten vegetation reports. No noxious weed species were identified. Some weedy species were present but were not included in the cover estimates in the vegetation report and were not competing with native desirable species.

16.a Roads: Construction, Maintenance, Surfacing

A road into Hardscrabble canyon will remain in place to suit post-mining land use as wildlife habitat, grazing and recreation. No road into Sowbelly canyon exists - only a small cattle trail.

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21. Bonding and Insurance

This Phase III application seeks to release \$263,500 of the existing surety bond posted for the Castle Gate Mine. The amount of bond once this application is approved will be reduced to \$226,600.



Figure 1 Hardscrabble Canyon with side canyon tributary in the background.



Figure 2. Former Goose Island Refuse Pile



Figure 3. Side Canyon in Hardscrabble - Former Surface Facilities and Portal Area



Figure 4 Hardscrabble Former Substation Area

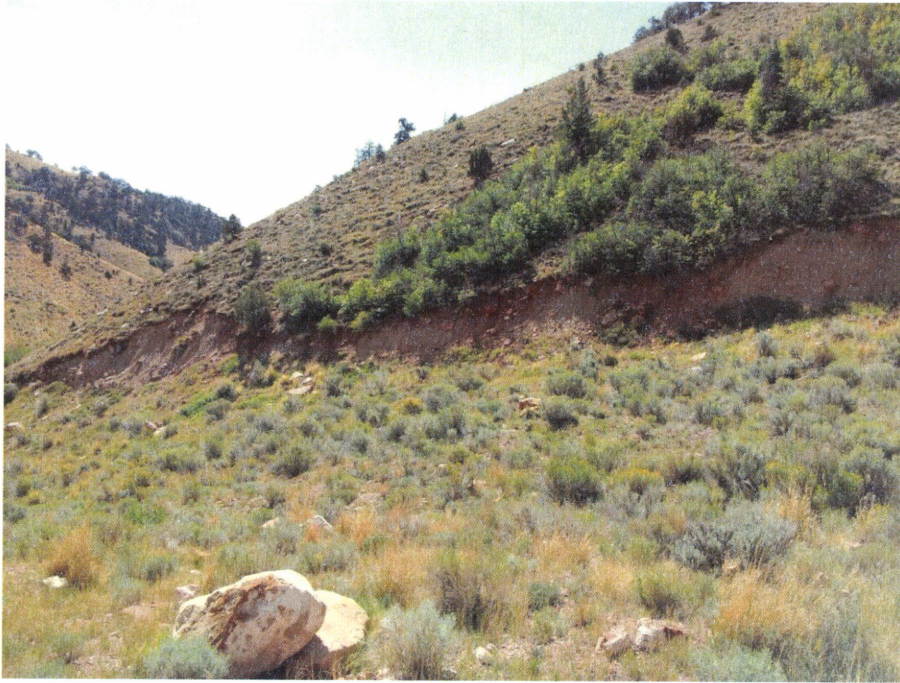


Figure 5 Cut slopes along Side Canyon in Hardscrabble



Figure 6 Downstream water monitoring location in Hardscrabble Canyon



Figure 7. Sowbelly Gulch Main Channel



Figure 8. Beginning of Trailhead at Sowbelly Gulch



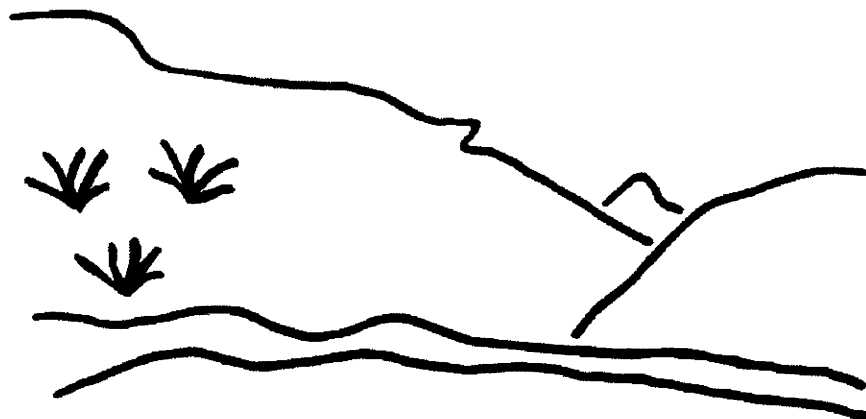
Figure 9. Sowbelly Upstream Water Monitoring Location

Vegetation Sample Photos





State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Castle Gate Mine
Phase III Bond Release
Hardscrabble and Sowbelly Gulch Canyons
C007/004
Technical Analysis
September 5, 2012

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TECHNICAL ANALYSIS

The Division ensures compliance with the Surface Mining Control and Reclamation Act of 1977(SMCRA). When mines submit an application for bond release, the Division reviews the proposal for conformance to the R645-Coal Mining Rules. This Technical Analysis is such a review. Regardless of these analyses, the Permittee must comply with the minimum regulatory requirements as established by SMCRA.

Readers of this document must be aware that the regulatory requirements are included by reference. A complete and current copy of these regulations and a copy of the Technical Analysis and Findings Review Guide can be found at <http://ogm.utah.gov/coal>

This Technical Analysis (TA) is written as part of the bond release review process. It documents the Findings that the Division has made to date regarding the application for bond release and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings. Only those sections that pertain to Phase III bond release have been analyzed. Specific findings are provided which indicate whether or not the application is in compliance with the Regulations.

INTRODUCTION

Earthwork at the Hardscrabble site was completed during the years 1984, 1985, and 1993 through 1999. Phase I bond release was approved for Goose Island (8.79 acres) in 1985. Phase I bond release was conditionally approved January 25, 2001 for Hardscrabble No. 3 and No. 4 Mine areas (29.9 acres) with final approval effective February 14, 2001. (The substation was reclaimed in 2002 and was not included in the Phase I bond release area.) The As-Built Reclamation Topography and Cross-section Location Map is Exhibit 3.3-19.

Castle Gate Holding Company applied for Phase II bond release for the Hardscrabble No. 3 and No.4 Mine areas of the Castle Gate Mine, less the 1.21 acre road and the 0.72 acre substation. The Utah Regulations allow for Phase II bond release after successful revegetation is completed and erosion is controlled to prevent suspended solids to stream flow and prohibit runoff outside of the permit area (R645-301-880.320). Phase II bond release on 37.1 acres in Hardscrabble canyon with the exclusion of the road (1.21 acres) and the substation 0.76 acres) was issued by the Division on February 21, 2003. In 2003, Hardscrabble Canyon was nominated by the Division for an "Excellence in Surface Coal Mining Reclamation Award" and was selected by the Department of Interior's Office of Surface Mining as one of the "National Awards" winners and went on to win the "Best of the Best" award. Mt. Nebo Scientific, Inc. performed a year-9 vegetation study and in 2009 vegetation monitoring was conducted to demonstrate vegetation success in preparation for Phase III bond release.

Reclamation work on the 0.72-acre substation in Hardscrabble Canyon was completed in the fall of 2002. Phase I Bond Release was approved in October 2005 . In 2008, Mt. Nebo Scientific, Inc. performed a year-4 revegetation study on the substation area.

Phase I bond release at Sowbelly Gulch Canyon was approved on January 31, 1997 (excluding the substation). Work on the substation was completed in 2002. Phase II Bond Release, not including the 1.84-acre substation, was issued on February 21, 2003. Phase I Bond Release was issued for the substation in September 2004. In 2007, Mt. Nebo Scientific Inc. performed a year-4 revegetation study on the substation area in Sowbelly Canyon. The Sowbelly Canyon substation is not included in this Phase III bond release.

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

Castle Gate Holding Company has held the permit on the Castle Gate Mine since September 11, 1998. The Mining and Reclamation Plan has a complete discussion of the company's structure in Chapter 2.

Findings

The information provided is adequate for the purposes of Phase III bond release.

LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

Analysis:

The Phase III application covers Hardscrabble Canyon approximately 4 miles northwest of Helper, Utah and Sowbelly Gulch approximately 4 miles west of Helper, Utah. The sites are located on the Standardville, Utah, U.S. Geological Survey 7.5 minute quadrangle map and is described as follows:

Township 13 South, Range 9 East, SLB&M, Utah

Section 3: SE1/4 SW1/4

Section 10: NW1/4 NW1/4, NE1/4 NW1/4, SE1/4 NW1/4, NW1/4 NE1/4, SW1/4 NE1/4, SE1/4 NE1/4.

Section 4: NW1/4SW1-4, SW1-4SW1/4

Section 9: NW1-4NW1-4

Findings:

The information provided is adequate for the purpose of Phase III bond release.

PUBLIC NOTICE AND COMMENT

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

Analysis:

Appendix 3 of the submittal includes a copy of the public notice. The advertisement contains all the information required by R645-301-880-120. An affidavit of publication has also been provided and is dated August 2012.

Appendix 4 of the application contains copies of notification letters sent to adjoining property owners: Blackhawk Coal Company, School Institutional Trust Lands Administration (SITLA), Division of Wildlife Resources, Division of Water Rights, the Bureau of Land Management; and local governmental bodies: the County Commission, the Carbon County Road Department, Carbon County Planning and Zoning.

Findings:

The information provided meets the requirements of the Regulations.

COMPLETENESS

Regulatory Reference: 30 CFR 777.15; R645-301-150.

Analysis:

All activities have been accomplished in accordance with the requirements of the Surface Mining and Control Act of 1977 as evidenced by the Division's approval of the As-Built drawings submitted with the Phase I bond release application, which was approved January 30, 1997. The Phase III bond release application contains a notarized C1C2 form certifying the truthfulness of the information submitted.

Findings:

The information provided in the bond release application meets the minimum certification requirements for Phase III bond release.

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

The application package contains a summary of the reclamation history of the permit area, vegetation monitoring studies performed in 2004 and 2005 for Sowbelly Gulch, vegetation monitoring studies performed in 2008 and 2009 for Hardscrabble Canyon, sediment yield calculations performed for all areas included in the Phase III application, a public notice, landowner and government agency notification letter including the Section, Township and Ranges locations of the areas included in the Phase III application, and a bond reduction calculation worksheet.

Findings:

The information provided is adequate for the purposes of Phase III bond release.

POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

The post mining land uses are identified in the Mining and Reclamation Plan, Volume IV, Chapter 4. They are identified as a single or combination of the following: grazing, wildlife habitat, recreational uses, hunting, BLM access for land management, mining and possible limited timber production in mid-evaluation areas. Post mining land use is also mentioned in Volume V, Chapter 9 page 9-12.

The post mining land use was achieved by developing seed mixes that benefit wildlife and other post mining land uses and revegetation success standards on the basis of tree and shrub stocking and vegetative ground cover.

The vegetation success standards were met and exceeded according to the Mt. Nebo Scientific reports found in the bond release application.

Findings:

The information in the bond release application is considered adequate to meet the post mining land use regulations.

Revegetation: Standards For Success

The vegetation in Sowbelly Canyon was monitored for year nine vegetation parameters in 2004 and year ten in 2005. The reference area was selected by DOGM and representatives from Plateau Mining Corporation. The reference area is a small portion of the AML areas down canyon from the permit area. Total living cover, species frequency and composition, and diversity were measured and compared to the reference area. Sowbelly Canyon is unique in that it was disturbed and mined prior to the enactment of SMCRA. Therefore, modern mining practices including the baseline inventory of vegetation as well as the removal and storage of topsoil did not occur. Therefore, representatives from DOGM, Mt. Nebo Scientific and Plateau Mining Corporation developed alternate success standards in accordance with R645-301-356.250 which states, "For areas previously disturbed by mining that were not reclaimed to the requirements of R645-200 through R645-203 and R645-301 through R645-302 and that are remined or otherwise redisturbed by coal mining and reclamation operations, at a minimum the vegetative ground cover will be not less than the ground cover existing before redisturbance and will be adequate to control erosion." Therefore, no woody species density or vegetative productivity parameters were measured. The total living cover of the reclaimed areas within sowbelly canyon met or exceeded the cover of the reference area. The plant species included in the cover measurements were comprised of desirable, non-weedy species.

The vegetation in Hardscrabble Canyon was monitored for year nine vegetation parameters in 2008 and year ten in 2009. Again, the reference area was selected by DOGM and representatives from Plateau Mining Corporation and is a small portion of the AML areas down canyon from the permit area. Also in Hardscrabble Canyon, because this area was disturbed for mining prior to SMCRA regulations, woody species density and annual biomass production were not required parameters for final bond release. The total living cover of the reclaimed area within Hardscrabble Canyon met or exceeded the cover in the reference area and the cover was comprised of desirable, non-weedy species.

RECLAMATION PLAN

September 12, 2012

A site visit to Sowbelly and Hardscrabble Canyons was conducted by the Division on August 29, 2012. The vegetation was well established and controlling erosion. Little to no weedy species were present and were not interfering with desirable vegetation. No noxious weeds were identified.

Extended Responsibility period

Reclamation work was completed in 1995 for Sowbelly Canyon. The extended responsibility period, according to R645-357.220 began in 1995 and ended in 2005 with the year ten vegetation monitoring.

Reclamation work was completed in 1999 for Hardscrabble Canyon. The extended responsibility period, according to R645-357.220 began in 1999 and ended in 2009 with the year ten vegetation monitoring.

Findings:

The information provided in the bond release application is considered adequate to meet the minimum regulations for the revegetation regulations.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

General

The reclaimed sites have adequately achieved approximate original contour (AOC). A few small cuts were left in place due to the fact that they were cut too steep to be fully covered, however, the cuts are minimal and achieve the stability requirements of R645-301-553.530, and meet the approximate original contour criteria of R645-301-553.520.

All backfilling, soil stabilization, compacting and grading, are as expected according to the MRP's anticipated final surface configuration of the permit area.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. No deficiencies were identified.

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

All mine openings have been appropriately sealed in accordance with MSHA, 30CFR 75.1711. Closures are considered permanent

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

Retention

The road to be retained for the post mining land use is 1.21 acres.

Findings:

The information provided is adequate for the purposes of the Regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

RECLAMATION PLAN

September 12, 2012

Analysis:

Analysis:

Hydrologic Reclamation Plan

The Permittee provided sediment yield calculations for each of the respective areas applied for in the Phase III application. The report was prepared by Earth Fax Engineering using the universal soil loss equation (RUSLE) using both the pre-disturbance and post-reclamation scenarios. The factors take into account rainfall runoff, soil erodibility, length of slope, cover management, and support practice.

The Permittee included in the Phase III Bond Release application Sediment Yield calculations for both canyons. The sediment yield calculations were analyzed by Earth Fax Engineering of Midvale, Utah under the direction of Utah Professional Engineer, Richard White PE No. 168246. Based on the report summary, both canyons displayed less sediment yields under the current reclaimed conditions in both canyons than the sediment yields from the canyons under the pre-mining conditions.

	Pre-Disturbance Condition	Post-Reclamation Condition
Sowbelly Gulch Canyon	0.78 tons/acre/year	0.70 tons/acre/year
Hardscrabble Canyon	0.06 tons/acre/year	0.02 tons/acre/year

In each of these areas, sediment yields were calculated to be less under the post-reclamation scenario than the pre-mining disturbance scenario. This is due to the reclamation earthwork completed, such as pocking providing for better erosion control then how the land would behave if it were still under non-disturbed conditions.

Hydrologic Balance Protection

Both Hardscrabble and Sowbelly Gulch canyons each have a principle ephemeral drainage channel in each canyon. There are a total of four active water monitoring locations within the Castle Gate permit area: two points located above and below the reclaimed disturbance areas of both canyons. Historically, although a quarterly water monitoring program has been in place as part of the conditions of the permit, there has not been any documented presence of water in Sowbelly Gulch based on historical data set dating back to 1996 on file with the Division. Hardscrabble canyon did not have any flow data in the historical data set dating back to 1977.

The exception was some flow data reported at the sampling point below the mine in the late 1970s, early 1980s with flows ranging from 2.24 to 44 gallons per minute.

The Willow Creek and Adjacent Areas Cumulative Hydrologic Impact Assessment (CHIA), Rev. 1996, which covers the Castle Gate permit, outlines the criteria for Material Damage as follows:

- a. Increased Sediment Yield
- b. Flooding or Stream Flow Alteration
- c. Water Quality
- d. Subsidence Damage to Springs and Seeps
- e. Alteration or Destruction of Fisheries and Aquatic Habitat
- f. Loss of Ground Water or Surface Water Availability

In the case of added sediment yield, all areas within the permit have been reclaimed and have gone through the applicable liability period for meeting the required vegetation standards. As such, none of the former disturbance areas have been documented to be the cause of excessive sediment leaving the permit area. The only exception is the road that is to be left in place in Hardscrabble Canyon, which is to facilitate access to the canyon and is compatible with the post-mining land use.

With respect to the flooding or stream flow alteration, water quality, and alteration or destruction of fisheries and aquatic habitat criteria, because there is no perennial or intermittent stream channels in either of these canyons and the fact that neither of these canyons have yielded any historical water quality data, none of these criteria have been impacted. Occasionally, flash flood events that are common to the region have likely occurred in these canyons that could feasibly release sediment loads to the drainage. However, given the distance of the nearest perennial streams supporting aquatic habitat, the Price River and Willow Creek, it is not very likely that this would provide a significant contribution of sediment to any receiving drainages where any fish or aquatic populations could suffer negative effects.

With respect subsidence damage to springs and seeps and to loss of groundwater and surface water availability, a total of 3 springs, Springs BM-30 (Adit #1), BM-31 (Near Mutual Spring) and B-32 (Gravel Springs) were monitored in the permit area up through the year 2001. The portals were sealed in Sowbelly and Hardscrabble canyons between 1988 and 1991 and the requirement in the approved MRP stated that the springs would be monitored for a period of two

RECLAMATION PLAN

September 12, 2012

years after sealing of the mine unless significant changes in water quality were to occur. Since no changes were observed, monitoring was discontinued after 3rd quarter of 2001. As a result, it does not appear that any negative effects from mining occurred resulting in the loss of groundwater from the area.

Findings:

The information provided in the Earth Fax Engineering study provides further evidence that suspended solids sediments are not contributing pollution to receiving drainages. All hydrologic reclamation work completed to date appears to be within the guidelines of Phase III Bond Release criteria. Sediment from the reclaimed areas is not impacting any downstream areas. Surface water leaving the reclaimed areas is suitable for supporting the post mining land uses. Based on an impact analysis from the material damage criteria set forth in the CHIA, onsite impacts to the permit area have been minimized and offsite impacts have been prevented. Surface water quality monitoring is no longer necessary to achieve the purposes set forth in the monitoring plan consistent with R645.301-731.224.1 and -224.2.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

The current performance bond for the Castle Gate Mine is \$490,100. This partial phase III bond release application will result in a bond release of \$263,500 after which the remaining bond amount will be \$226,600 in 2014 dollars. The segments of the permit for which Phase III is being filed are the Hardscrabble and Sowbelly Canyons not including the substations. The Hardscrabble and Sowbelly Substations and Adit #1 will remain in Phase I. The current bond was broken down in segments identifying those segments that will receive phase III bond release and those segments that will remain in phase I. The bond was escalated from 2011 dollars to 2014 dollars.

The table below shows the bond amount prior to the last bond release (\$680,154) which occurred in March of 2006, the March 2006 phase I bond release for the Substations in Hardscrabble and Sowbelly Canyons as well as the Adit #1 (\$190,054), the current bond amount in 2006 dollars (\$490,100), the amount of bond that will remain following this Partial Phase III Bond Release in 2006 dollars (\$218,600) and the amount that will remain after this Partial Phase III Bond Release escalated to 2014 dollars (\$225,600) and the amount of this Partial Phase III Bond Release (\$263,500).

RECLAMATION PLAN

	Bond Prior to March 2006 Bond Release	March 2006 Phase I Bond Release	March 2006 Bond In 2011 Dollars	Remaining after Partial <u>Phase III</u>
Hardscrabble Canyon	\$179,500	\$0	\$179,500	\$0
Sowbelly Canyon	\$92,000	\$0	\$92,000	\$0
Hardscrabble Substation	\$138,500	-\$51,000	\$87,500	\$87,500
Sowbelly Substation	\$141,000	-\$65,000	\$76,000	\$76,000
Adit #1	<u>\$129,154</u>	<u>-\$74,054</u>	<u>\$55,100</u>	<u>\$55,100</u>
Totals	\$680,154	-\$190,054	\$490,100	\$218,600
		Escalate to 2012 dollars @1.2%		\$221,223
		Escalate to 2013 dollars @1.2%		\$223,878
		Escalate to 2014 dollars @1.2%		\$226,564
		Bond in 2014 \$ Rounded		\$226,600
		Current Bond		\$490,100
		Bond Remaining after Phase III		<u>\$226,600</u>
		Bond Amount to be Released		\$263,500

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

UTAH DIVISION OF OIL, GAS AND MINING
STATE DECISION DOCUMENT

For
Phase III Bond Release

Castle Gate Holding Company
Sowbelly Gulch & Hardscrabble Canyons
Castle Gate Mine
C/007/004
Carbon County, Utah

September 5, 2012

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ADMINISTRATIVE OVERVIEW

Castle Gate Holding Company
Sowbelly Gulch and Hardscrabble Canyon
Castle Gate Mine
C/007/004
Carbon County, Utah

September 5, 2012

ACTION

Phase III bond release is requested for Sowbelly Gulch and the Hardscrabble Canyons in the amount of \$263,500. This request excludes Adit #1, the 0.72-acre Hardscrabble substation and the 1.84-acre substation in Sowbelly Gulch. Once approved, the performance bond will be reduced to \$226,600 to cover the remaining 5.56 acres mentioned above that have been excluded from this application.

BACKGROUND

The Castle Gate Mine Complex is located approximately 10 miles north of Price, Utah, in the Wasatch Plateau coal fields in Carbon County. The disturbed areas are in Hardscrabble Canyon (39 acres), Sowbelly Gulch (21 acres), and Price Canyon [Adit No.1 (3 acres)]. The bonded or disturbed area for the entire Castle Gate Mine complex is 63 acres.

The initial permit was issued to the Price River Coal Company on December 24, 1984. Castle Gate Coal Company acquired the right to mine the western reserves and obtained a permit transfer on May 30, 1986. On May 25, 1991, the Division approved the permit transfer from Castle Gate Coal Company to Amax Coal Company. On July 2, 1996, the Castle Gate permit was transferred from Amax Coal Company to Amax Coal Holding Company, which became Amax Coal Company again on August 5, 1996. The permit was transferred to the current Permittee, Castle Gate Holding Company, on September 11, 1998.

In May 1995, the Division received an application from Cyprus Plateau Mining Corporation to permit the eastern coal reserves and a portion of the Castle Gate Mine as the new Willow Creek Mine. In April 1996, the Willow Creek Mine was permitted, and its permit area overlapped with that of the Castle Gate Mine. In June of 1997, the Castle Gate and Willow Creek Mines were split apart which left the Castle Gate Mine with the Sowbelly Gulch, Hardscrabble Canyon, and Adit No. 1 areas. The Schoolhouse Canyon refuse area, the Castle Gate preparation plant, Crandall Canyon, the Gravel Canyon topsoil storage area, and a refuse

storage area (a site previously reclaimed by the Abandoned Mine Lands Reclamation program) were all transferred to the Willow Creek Mine. Currently, the Castle Gate preparation plant is being dismantled and reclaimed under the Willow Creek Mine permit.

Hardscrabble Canyon

Hardscrabble canyon represents 39 acres of the disturbed area boundary within the Castle Gate permit. Hardscrabble reclamation work began in 1984 with the reclamation of the Goose Island refuse pile followed by reclamation of the No. 3 and No. 4 Mine areas from 1993 through 1999 and 2002 (substation). The road through the disturbed area was altered but left in place for the postmining land use. In 1997, AMAX Coal Company, Castle Gate Holding Company's predecessor, received an Earth Day Award from the Board of Oil, Gas, and Mining for "outstanding final reclamation and site restoration". The company was commended for enhancing the postmining land use by restoring the canyon to a more natural configuration and paying particular attention to wildlife habitat while providing more stable water flow channels and better downstream water quality.

The Hardscrabble Phase I bond release application was conditionally approved (with OSM concurrence) on January 25, 2001 for 29.9 acres. (This 29.9 acre figure included the 2.2 acres of buffer zone and the 27.7 acres of No. 3 and No. 4 mines reclaimed area.) Final approval of the Phase I bond release was effective February 14, 2001. There are also 8.79 acres in the reclaimed Goose Island refuse pile, which received Phase I bond release in 1985. In all, 38.7 acres have received Phase I bond release to date.

Phase II bond release on 37.1 acres in Hardscrabble canyon with the exclusion of the road (1.21 acres) and the substation 0.76 acres) was issued by the Division on February 21, 2003. In 2003, Hardscrabble Canyon was nominated by the Division for an "Excellence in Surface Coal Mining Reclamation Award" and was selected by the Department of Interior's Office of Surface Mining as one of the "National Awards" winners and went on to win the "Best of the Best" award. Mt. Nebo Scientific, Inc. performed a year-9 vegetation study and in 2009 vegetation monitoring was conducted to demonstrate vegetation success in preparation for Phase III bond release.

Reclamation work on the 0.72-acre substation in Hardscrabble Canyon was completed in the fall of 2002. Phase I Bond Release was approved in October 2005. In 2008, Mt. Nebo Scientific, Inc. performed a year-4 revegetation study on the substation area.

Sowbelly Gulch

The Sowbelly disturbed area encompasses 21 acres. Reclamation grading started in the Sowbelly Gulch portion of the disturbed area in 1993 and continued through 1995. Phase I bond release of 18.2 acres at Sowbelly was approved on January 31, 1997 (excluding the substation).

Work on the substation was completed in 2002. Phase II Bond Release, not including the 1.84-acre substation, was issued on February 21, 2003. Phase I Bond Release was issued for the substation in September 2004. In 2007, Mt. Nebo Scientific Inc. performed a year-4 revegetation study on the substation area in Sowbelly Canyon. The Sowbelly Canyon substation is not included in this Phase III bond release.

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CHRONOLOGY FOR PHASE III BOND RELEASE

Castle Gate Holding Company
Sowbelly and Hardscrabble Canyons
Castle Gate Mine
C/007/004

September 30, 2012	30-day Public Comment Period Ends. Comments received?
August 29, 2012	Phase III Bond Release inspection.
August 21, 2012	Division sends letters of invitation to Utah Division of Wildlife Resources, BLM, Carbon County Planning and Zoning, Carbon County Commission, Utah Division of Water Rights, Utah Department of Transportation, SITLA, Utah Division of State History, Blackhawk Coal Company, private landowners, and OSM of bond release inspection to be held August 29, 2012.
August 6, 2012	Phase III bond release published in the Sun Advocate for four subsequent weeks.
July 30, 2012	CGHC submits Phase III bond release application for Hardscrabble and Sowbelly Canyons.
February 21, 2003	Decision Document authorizing Phase II Bond Release for Sowbelly Gulch No. 5 Mine & Hardscrabble Canyon issued by the Division
May 3, 2002	CGHC sends letters to local governments, and property owners of proposed bond release: Mr. Gary Harwood, American Electric Power Service Corporation the Bureau of Land Management, and the Carbon County Commission, the Carbon County Road Department and the Carbon County Planning and Zoning.
May 8, 2002	CGHC submits Phase II bond release application for Hardscrabble and Sowbelly.
July 16, 2000	Phase II bond release published in the <u>Sun Advocate</u> for four subsequent weeks. There are separate notices for Hardscrabble and for Sowbelly.
August 13, 2002	Division sends letters of invitation to SITLA, BLM, and OSM of bond release inspection to be held August 22, 2002.
August 22, 2002	Phase II bond release inspection.

PHASE III BOND RELEASE FINDINGS

Castle Gate Holding Company
Sowbelly Gulch and Hardscrabble Canyon
Castle Gate Mine
C/007/004
Carbon County, Utah

September 5, 2012

SUMMARY OF FINDINGS

The Phase III bond release findings for Sowbelly and Hardscrabble Canyons are in the attached Technical Analysis dated September 2012. The Phase III bond release was advertised for four consecutive weeks in the Carbon County Sun Advocate newspaper. **No comments were received during the public comment period.** A bond release inspection was conducted on August 29, 2012. No problems were identified. BLM and OSM were both present at the inspection. Concurrence letters from both agencies are pending.

PHASE III BOND RELEASE RECOMMENDATION

The Permittee has demonstrated the establishment of vegetation at both Sowbelly Gulch and Hardscrabble Canyons. It is recommended that \$263,500 be released for Sowbelly and Hardscrabble Canyons (a total of 57.44 acres).

On approval of this request, remaining areas requiring Phase II and III Bond Release include the 0.72 reclaimed substation in Hardscrabble Canyon, the 1.84-acre reclaimed substation in Sowbelly Gulch, and 3.0 acres within Adit #1.